

REMARKS

The Examiner has rejected claims 1-4, 25, 26 and 30 as anticipated by U.S. Patent No. 3,000,321 to Parker and U.S. Patent No. 4,787,823 to Hultman. Claims 1-6, 25 to 28 and 30 stand rejected as obvious over Parker in view of Hultman in further view of U.S. Patent Publication No. 2004/0179960 to Lenke. Claim 29 stands rejected over Parker, Hultman, and Lenke in further view of U.S. Patent No. 5,073,095 to Thomas.

The Examiner has further objected to the drawings, specification and claim 29 based upon form, and Applicant has amended the drawing and specification to comply with the Examiner's requirements.

The Examiner has further rejected claim 1-30 under 35 U.S.C. § 112, ¶¶ 1 and 2 for failing to comply with the enablement requirement, for omitting essential elements and for indefiniteness.

I. Objections

Numerals 3, 28 and 34 have been added to Fig. 1, and Figs. 1 and 2 have been enlarged for clarity. No modifications have been made to Figs. 1 and 2 except the addition of numerals. The lead line for numeral 22 in Fig. 1 has been moved. The internal structure of check valve 22 is not shown because check valves are known in the art. The structural relationship of piston 8, piston end cap 7 and machine ball 17 should be clearer now that Figure 1 has been enlarged. Formal drawings will be supplied to Examiner shortly.

In the specification, "check valve assembly 22" has amended to "check valve 22" throughout and in claim 16. "First housing end cap 22" has been corrected at page 5, line 10. The paragraph beginning page 5, line 17 has been modified for clarity. The axial opening has

been labeled numeral 46 in the figure for the Examiner's understanding. On page 6, "axially" has been amended to "axial."

In claim 29, the word "is" has been deleted.

II. Rejections under 35 U.S.C. § 112

The Examiner has rejected claims 1-30 as not enabled by the specification. The Examiner questions what structure forms the valve seat for machine ball 17. Page 8, line 9-10 describe that: "The biased piston 8 presses against the machine ball 17 to seal the machine ball 17 against the piston end cap 7." The Examiner also questions in which direction does it prevent flow. One of ordinary skill in the art would recognize the filter 43 is on the input side of the fuel pump. From that one of ordinary skill would recognize that it prevents reverse flow back from the pump into the filter. The Examiner also questions how fuel flows past the piston. It is respectfully pointed out that operation of the fuel pump is discussed at page 8, line 7 to page 9, line 5.

The Examiner has rejected claim 1-30 as being indefinite and omitting essential matter. The Examiner states that there is no structural or functional relationship between the structural limitations as recited in claims 1, 5, 6, 7, 25, 27, 28 and 30. Claims 1 and 30 have been amended to recite the relationship of the enclosure to the piston assembly. Claim 5 has been amended to recite the functional relationship of the method steps recited therein.

Claim 22 has been amended to no longer depend from claim 21.

Claims 25-29 have been amended to include limitations that overcome the rejection under 35 U.S.C. § 112, ¶ 1.

Claim 29 has been amended for proper antecedent basis.

III. Rejections under 35 U.S.C. § 103

The Examiner has rejected claim 1 under 35 U.S.C. § 103 over the combination of Parker and Hultman. The Examiner states that the prior art patents are deemed inherently capable of operating at performance levels claimed in claim 1, but has disregarded such limitations as non-limiting functional elements. With respect to claim 1, Applicant has amended the claim to recite that the coil and piston are specifically *adapted* to operate at the recited frequencies to produce the recited fuel pressure at the recited electrical input making such elements positive structural elements. None of the prior art shows a coil and piston assembly that is so adapted.

Moreover, claim 25, a method claim, has been amended to specifically recite that the fuel pump is operated at the recited frequency and input voltage and current to result in the desired output fuel pressure. In a method claim, the functional elements cannot be ignored.

In claim 30, the functional elements are recited in a means plus function claim limitation. In such claims, functional elements form the basis of the claim limitation and cannot be ignored.

Moreover, none of the prior art discloses a fuel pump which can create the desired fuel pressure and volume at the recited piston frequency and power input. The Examiner states that Hultman is structurally similar to the present invention. However, this is undercut by the Examiner's rejection under § 103, which implicitly recognizes the differences between the structure of Hultman and the present invention. To be inherently disclosed, the performance characteristics of the present claims *must necessarily* be in the prior art and not merely *possibly be present* in the prior art, and in this case this showing cannot be made. As such, claims 1, 25 and 30 are allowable over the prior art of record.

Claims 2-4 and 26 depend from claims 1 and 25, respectively. As such, these claims are allowable over the combination of Parker and Hultman for at least the same reasons as claims 1 and 25.

The Examiner has rejected 1-6, 25-28 and 30 under 35 U.S.C. § 103 over the combination of Parker, Hultman and Lenke and claims 29 as rendered obvious by Parker, Hultman, Lenke, and Thomas.

To be prior art under 35 U.S.C. § 103, the reference must qualify as prior art under one of the sections of 35 U.S.C. § 102. Lenke is a continuation of a PCT patent application not published in the English language. Lenke has a filing date of March 23, 2004. Therefore, the earliest date under section 102(e) that Lenke would qualify as prior art is March 23, 2004. Lenke's 102(a) and (b) dates are September 16, 2004.

The present application was filed September 23, 2003. Therefore, the Lenke publication is not prior art to the present application's own filing date, let alone its earliest priority date.

As such, this rejection of claims 1-6 and 25-30 fails because Lenke is not prior art.

IV. Conclusion

Based on the foregoing, the allowance of claims 1-30 is respectfully requested. If for any reason the Examiner is unable to allow the application on the next Office Action, the Examiner is requested to contact the undersigned attorney for the purpose of arranging an interview.

Respectfully submitted,



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REPLACEMENT SHEET

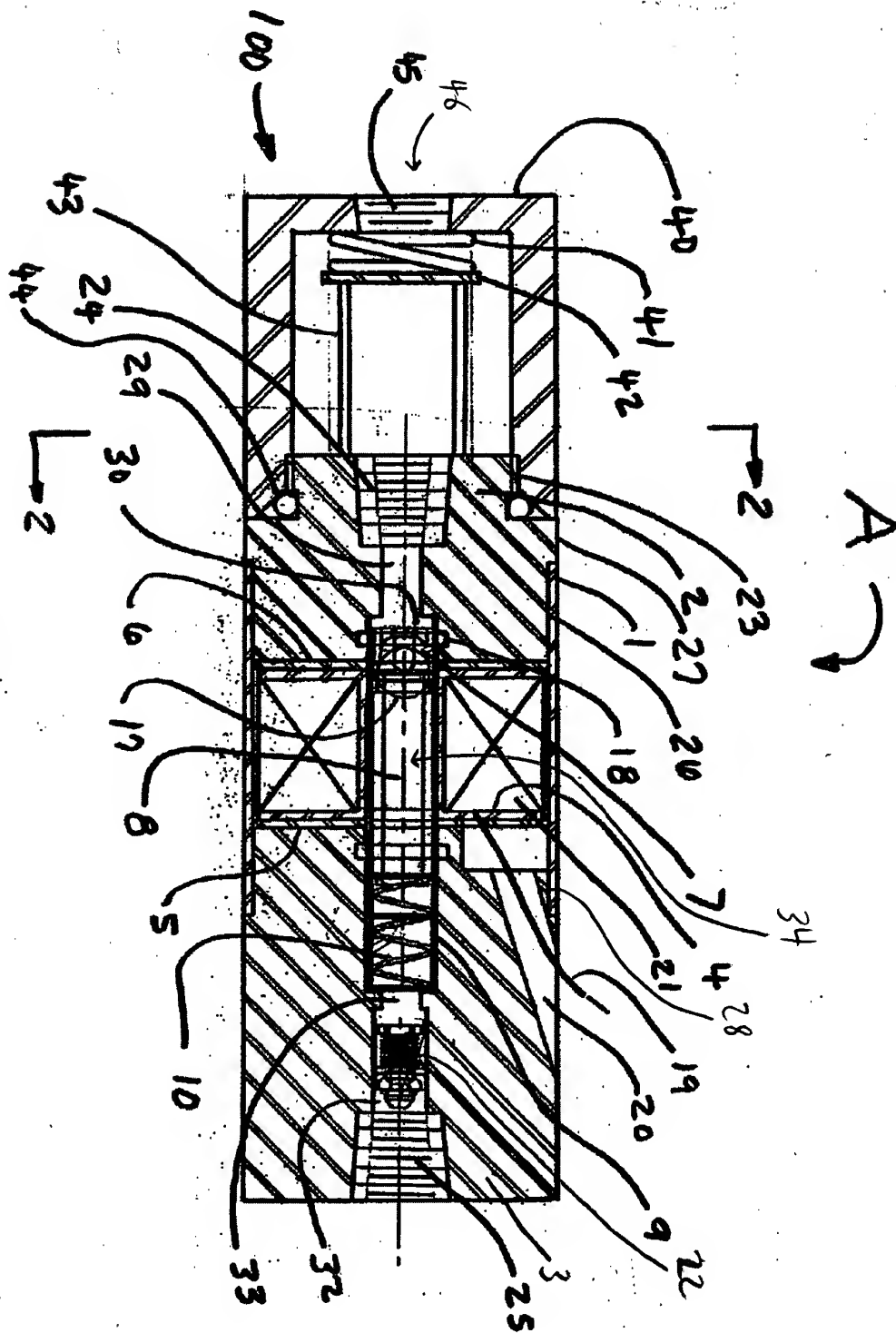


FIG. 1